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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/716,180

Applicant(s)

BOSE ET AL.

Examiner

MON CHERI S. DAVENPORT

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 01 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 and 24-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 and 24-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 22-23 and 36-37 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/888)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. **Claims 1-21 and 24-35**, drawn to method and apparatus for channel allocation, classified in class 370, subclass 329.
 - II. **Claims 22-23 and 36-37**, drawn to a system of servers with backup servers, classified in class 709, subclass 203.
2. Inventions Group I and Group II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different designs, modes of operation, and effects (MPEP § 802.01 and § 806.06). In the instant case, the different inventions “a method and apparatus for channel allocation of Group I is unrelated and distinct from “a system of servers with backup servers.”
3. Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:
 - (a) the inventions have acquired a separate status in the art in view of their different classification;
 - (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
 - (c) the inventions require a different field of search
 - (d) the prior art applicable to one invention would not likely be applicable to another invention;

(e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

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4. During a telephone conversation with Rex I. Huang on April 22, 2008 a provisional election was made without traverse to prosecute the invention of group I, Claims 1-21 and 24-35. Affirmation of this election must be made by applicant in replying to this Office action. Claims 22-23 and 36-37 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-21 and 24-35** rejected under 35 U.S.C. 103(a) as being unpatentable over Burke et al. (US Patent Number 5,406,643) in view of Palm (US Patent Number 6,735,245).

Regarding **claims 1, 8, and 15** Burke et al. disclose an apparatus for allocating channels, comprising:

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a memory that stores executable instruction signals(see fig. 2, section 14, ROM); and

a processor that executes the instruction signals to (see fig. 2, section 16, CPU):

determine the communication standard used by the received message (see col. 2, lines 25-29, a subscriber unit to select from amongst a plurality of communications media, that particular media for establishing a communications path to a specified end point);

determine available channels(see col. 2, lines 44-48, The packet server maintains a session list identifying currently available connections (virtual links) to a specific end point,); and

allocate a channel based on the available channels and the communication standard used by the received message(see col. 2, lines 49-53, The device manager maintains a list specifying the possible communications paths to specific end points and actually controls the communications resources responsible for establishing a communications path).

However over Burke et al. fail to specifically point out receiving a message having a format that is in compliance with a communication standard, and determine the communication standard used by the received message, allocate a channel based on the available channels and the communication standard used by the received message as claimed.

Palm teaches receiving a message having a format that is in compliance with a communication standard, and determines the communication standard used by the received message, and allocate a channel based on the available channels and the communication standard used by the received message(see col.4-5, lines 63-5, determines the communication standard, of the received examination negotiation information, see col. 5, lines 20-23- the negotiation information being in compliance to a communication standard);

Palm teaches allocate a channel based on the communication standard used by the received message (see col. 4, lines 44-53, auditing a condition of the communication channel, and selection based on the communication standard and the capability).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention n was made to combine Burke et al.'s invention with Palm's invention, because Palm invention detects various configuration capabilities and limitations of a communication channel, to determine an appropriate communication standard appropriate for the existing line conditions (see palm, col. 2, lines 47-51).

Regarding **Claims 2, 9 and 16** Burke et al. discloses everything as applied above (see *claims 1, 8 and 15*). In addition the method, apparatus, and article includes:

send a notification to use the channel(see col. 2, lines 38-39, see fig. 7, section 88, establishing a connection, see also col. 7, lines 35-39, flow proceeds to block 90 where packet server 34 establishes the communication path connection(reads on notification to use channel) in preparation for transmission of information).

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Regarding **Claims 3, 10 and 17** Burke et al. discloses everything as applied above (see *claims 2, 9 and 16*). In addition the method, apparatus, and article includes:

wherein to send an instruction comprises sending an instruction to a software-defined signal processing system to allocate the appropriate channel for the received message(see col. 7, lines 35-39, establishes the communication path connection in preparation for transmission of information between software application)

Regarding **Claims 4, 11 and 18** Burke et al. discloses everything as applied above (see *claims 1, 8 and 15*). In addition the method, apparatus, and article includes:

wherein the spectrum of channels includes a channel dedicated to AMPS(see col. 3, lines 50-54, Communications paths 4, 6, and 8 may consist of wireless or wireline communications media such as, but not limited to, telephone lines, twisted pair wire, fiber-optic links, infrared channels, and radio frequency channels, AMPS is included as wireless).

Regarding **Claims 5, 12 and 19** Burke et al. discloses everything as applied above (see *claims 1, 8 and 15*). In addition the method, apparatus, and article includes:

wherein the received message is a call (see col. 2, lines 28-29, establishing a communication path reads on message is a call)).

Regarding **Claims 6, 13 and 20** Burke et al. discloses everything as applied above (see *claims 1, 8 and 15*). In addition the method, apparatus, and article includes:

wherein the received message is a message that is received through an antenna (see col. 2, lines 26-29, establishing a communication path reads on a message is received, see col. 3, lines 50-54, communication paths are wireless, therefore message is received through an antenna).

Regarding **Claims 7, 14 and 21** Burke et al. discloses everything as applied above (see *claims 1, 8 and 15*). In addition the method, apparatus, and article includes:

wherein the received message for transmission(see col. 2, lines 49-53, The device manager maintains a list specifying the possible communications paths to specific end points and actually controls the communications resources responsible for establishing a communications path, this reads on the message is being processed to determine the communication path for transmission).

Regarding **Claims 24** Burke et al. discloses everything as applied above (see *claim 8*).

wherein the processor sends an instruction to allocate a channel dedicated to the communication standard for communicating with a mobile device that sent the message (see col. 2, lines 49-53, the device manager maintains a list specifying the possible communications paths to specific end points and actually controls the communications resources responsible for establishing a communications path, see col. 4 lines 18-26, control information are communicated to the media communication equipment(mobile device) enabling to communicate over communication control paths)).

Burke et al. fails to specifically point out a processor sends an instruction to allocate a channel dedicated to the communication standard as claimed.

Palm teaches a processor sends an instruction to allocate a channel dedicated to the communication standard (see col. 4, lines 44-53, auditing a condition of the communication channel, and selection based on the communication standard and the capability).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention n was made to combine Burke et al.'s invention with Palm's invention, because Palm invention detects various configuration capabilities and limitations of a communication channel, to determine an appropriate communication standard appropriate for the existing line conditions (see palm, col. 2, lines 47-51).

Regarding **Claims 25, 31 and 35** Burke et al. discloses everything as applied above (*see claims 24, 30, and 33*).

wherein the processor sends an instruction to a software-defined signal processing device to send another message to the mobile device to use the allocated channel (see col. 4, lines 51-66, the send_message function interface with packet server through external software delimited by the runtime engine, which provides the ultimate path selection)

Regarding **Claims 26** Burke et al. discloses everything as applied above (*see claim 8*).

wherein the communication standard comprises at least one of advance mobile phone service (AMPS), global system for mobile communications (GSM), code division

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multiple access (CDMA), enhanced data rates for GSM evolution (EDGE) and wideband code division multiple access (WCDMA) standard (see col. 3, lines 50-54, Communications paths 4, 6, and 8 may consist of wireless or wireline communications media such as, but not limited to, telephone lines, twisted pair wire, fiber-optic links, infrared channels, and radio frequency channels, AMPS is included as wireless)..

Regarding **Claims 27 and 28** Burke et al. discloses everything as applied above (*see claim 8*).

the processor allocates channels dedicated to the communication standards associated with the messages (see col. 2, lines 49-53, The device manager maintains a list specifying the possible communications paths to specific end points and actually controls the communications resources responsible for establishing a communications path).

However Burke et al. fails to specifically point out wherein the processor receives messages having formats that are in compliance with communication standards, at least some of different messages complying with different communication standards; processor dynamically responds to the messages to utilize spectrum according to a current usage pattern as claimed.

Palm teaches wherein the processor receives messages having formats that are in compliance with communication standards, at least some of different messages complying with different communication standards standard; processor dynamically responds to the messages to utilize spectrum according to a current usage pattern (see col. 4, lines 44-53, auditing a condition of the communication channel, and selection based on the communication standard and the capability, see also col. 5, lines 63-67, analyzing the

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channel information (utilized spectrum and current usage pattern), in conjunction with exchanged negotiation information and received channel information, by a processor of the received message)

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to combine Burke et al.'s invention with Palm's invention, because Palm invention detects various configuration capabilities and limitations of a communication channel, to determine an appropriate communication standard appropriate for the existing line conditions (see palm, col. 2, lines 47-51).

Regarding **Claims 29** Burke et al. discloses everything as applied above (*see claim 8*).

However Burke et al. fails to specifically point out wherein the processor determines frequencies licensed to a user of the message as claimed.

Palm teaches wherein the processor determines frequencies licensed to a user of the message (see col. 2, lines 9-14, the frequency characteristics is useful prior to connection of the communication link).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to combine Burke et al.'s invention with Palm's invention, because Palm invention detects various configuration capabilities and limitations of a communication channel, to determine an appropriate communication standard appropriate for the existing line conditions (see palm, col. 2, lines 47-51).

Regarding **Claim 30** Burke et al. discloses everything as applied above (*see claim 29*).

wherein the processor chooses from a list of available channels a channel that meets at least one of the frequency requirement and a bandwidth requirement (see figure 7, selecting from a list of available channels, see also col. 11, lines 10-17, in memory is a list of possible communication paths for automatic selection based on communication criteria defined by software, which includes frequency and bandwidth requirement).

Regarding **Claim 32** Burke et al. discloses everything as applied above (*see claim 8*).

wherein the received message comprises a short-message, text, a housekeeping signal, or intended consumer signals(see col. 3-4, lines 50-26, communication between devices of the system are capable and include , short-message, text, housing keeping signal or consumer signals).

Regarding **Claim 33 and 34** Burke et al. discloses everything as applied above (*see claims 14 and 33*).

wherein the message comprises a broadcast (see col. 3, lines 50-54, the communication paths consist of radio frequency channels which is capable of sending a broadcast and receiving to a mobile device, see also col. 2, lines 49-53, The device manager maintains a list specifying the possible communications paths to specific end points and actually controls the communications resources responsible for establishing a communications path).

Citation of Pertinent Prior Art

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

4. **Bose et al.** (US Patent 6,584,146). System that is capable of receiving from different communication standards and determining the different communication standards.

Response to Arguments

5. Applicant's arguments with respect to claim1 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MON CHERI S. DAVENPORT whose telephone number is (571)270-1803. The examiner can normally be reached on Monday - Friday 8:00 a.m. - 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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April 25, 2008